

lies unused on dusty museum shelves, as shown by the work of Frayer and Smith on old collections of skeletons.

The most difficult issue is why the form and frequency of violence vary from one place to another and from one time period to the next. This topic is the real reason we are interested in these osteological and archaeological materials, but for the most part it awaits further research. As the editors note, it is difficult or impossible to identify from ancient remains the immediate causes of violence, such as seeking revenge, enhancing personal prestige, and the like. But this shortcoming is of little importance to the study of the social and environmental settings fostering conditions where serious conflicts were more likely to break out than in other times and places. Several authors, including Lambert and Keeley, point out that periods of increased violence seem to be associated with greater pressure on scarce or unpredictable resources, as well as population expansions at the expense of neighboring peoples.

The kinds of studies highlighted by this volume can greatly advance our knowledge of violence in preindustrial societies. Ember and Ember make the commonly voiced point that relatively recent small-scale societies cannot be considered survivals from ancient times, and thus their propensity for violence cannot be directly extrapolated to their prehistoric counterparts. This point is argued forcefully by Ferguson, both here and in his other writings, when he maintains that the intensity of conflict among newly contacted

peoples exceeds that which occurred in prehistory. Here we have one of the most important reasons for systematically examining prehistoric skeletons, sites, and artifacts: they are the only means of identifying the kinds of violence experienced by peoples unaffected by the inexorable advance of colonizing powers over the last few hundred years.

One result of the osteological work is worthy of special note. For healed injuries, it is commonly assumed that trauma frequencies increase with advanced age. Just such a correlation of fractures with age appears to be true of the broken noses in Walker's study. Yet this simple relationship was not found in fractures of the cranial vault in Walker's several skeletal samples or in Lambert's prehistoric California Indians. Nor was it found in Robb's ancient Italian skeletons where all forms of trauma were combined. Apparently the survivors of many forms of intentional and accidental trauma experienced a greater risk of death than their uninjured contemporaries.

This provocative volume will command the attention of future researchers interested in this relatively neglected aspect of the behavior of prehistoric peoples. It will appeal to a wide variety of scholars in the many academic disciplines concerned with understanding purposeful violence in human societies.

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BIOARCHEOLOGY OF THE SOUTH CENTRAL UNITED STATES. Edited by Jerome C. Rose. Fayetteville, AR: Arkansas Archeological Survey Research Series No. 55. 1999. 297 pp. ISBN 1-56349-086-2. \$30.00 (paper).

Despite the publication of several major regional syntheses of osteological data over the past two decades, biological anthropologists continue to crave more comparative data in order to address increasingly com-

plex questions concerning subsistence changes, health trends, and genetic relationships among past populations. This volume has, to a large extent, answered that call. Packed with 160 tables and 39 figures, the primary purpose of this volume is to provide an exhaustive synthesis of data from both published and unpublished sources representing six broadly defined regions encompassing Colorado, Kansas, New Mexico, Texas, Oklahoma, Missouri, Arkansas, and Louisiana.

Following a brief introduction by Rose, each of the six chapters synthesizes the entire temporal range of human occupation in their respective regions. All of the chapters follow a similar format, including a historical overview of bioarchaeological investigation in the regions, data synthesis, and preliminary interpretations. Each chapter presents a distribution of skeletal data by a number of different variables, including author/excavator, site, cultural affiliation, site type (e.g., mound or habitation), various geographic subregions, and temporal clusters.

The theoretical emphasis of the volume is to provide a diachronic view of the adaptive success of past peoples in each region. Thus, each chapter divides the skeletal data into several region-specific adaptation types based on temporal-cultural affiliations. Demographic data, particularly age at death, and the frequency and type of pathological conditions are used to assess adaptive success. Pathological conditions most often reported include caries, porotic hyperostosis, adult and subadult infection, dental wear, trauma, degenerative osteoarthritis, and vertebral arthritis. Life tables are only available for certain components in three of the chapters. Testable hypotheses concerning health and demographic trends, shifting subsistence strategies, and intergroup violence are generated for most regions.

In the opening chapter, Rose, Burnett, and Harcourt present a large amount of osteological data from the Ouachita Mountains, Arkansas River Valley, and Ozark Mountains. Paleopathological indicators are summarized by four adaptation types (Early to Middle Holocene, Late Holocene Semisedentary, and Late Holocene Sedentary/Dispersal Adaptations). While the authors argue against maize consumption in the Caddoan samples of the Arkansas basin based on low caries and porotic hyperostosis rates, the small sample sizes preclude a substantive challenge to the archaeological evidence of maize agriculture.

The second chapter by Rose and Harmon covers all available bioarchaeological data (Archaic through Historic) from Louisiana and southeast Arkansas. Paleopathological data are reported in summary form by pe-

riod and culture for four subregions, the Northern and Southern portions of the Lower Mississippi Valley, Gulf-Coastal Louisiana, and the Trans-Mississippi South region, with most of the information coming from the Mississippian period. Given the paucity of existing data, the authors recognize that their interpretive power is limited and propose a number of hypotheses for future testing that principally relate to the nature, timing, and biological consequences of subsistence strategy shifts.

Chapter 3 incorporates sections written by Rose, Steele, Burnett, Reinhard, and Olive concerning osteological data from the Gulf Coastal Plain of eastern Texas, Oklahoma, Arkansas, and Louisiana. The region is divided into eastern and western portions based on the boundaries of the Caddoan culture area and the different history of bioarchaeological investigations in each area. This study provides a better picture of the ecological variation of the region and discusses some biocultural analyses, including mortuary practices, which were noticeably absent in earlier chapters. Summary data on the frequency of abscesses and antemortem tooth loss are nice additions to the paleopathological overview. A life table is provided for inland and coastal samples of the western portion.

Steele, Olive, and Reinhard provide a less detailed but more synthetic overview of the Central, South, and Lower Pecos Texas regions. The authors offer a thematic review of previous bioarchaeological research in the region, including studies of cannibalism, paleopathology, and taphonomy. The second part of the chapter attempts to assess the adaptive success among 11 adaptive types (covering Paleoindian to Historic groups) in four subregions. A life table is provided for all of the available samples combined and shows no major differences in age at death between subregions. While the authors demonstrate that populations in each region have differential adaptive success, no trends are clearly evident.

Owsley, Marks, and Manhein synthesize data from the Southern Plains, including 210 counties across New Mexico, Colorado, Oklahoma, Kansas, and northwest Texas. Significantly less data are presented, but

Owsley provides the most comprehensive paleopathological coverage in the volume, including six photographs. Owsley and Jantz provide a standardization methodology for data collection and include tables from two sites to illustrate their coding system and reporting procedures. While this chapter predates the volume by Buikstra and Ubelaker (1994) of recommended standards of data collection, the paleopathology coding system presented here is more detailed and could provide a supplementary, "in-house" database for large collections.

Chapter 6 by Stodder provides the hallmark case of what the volume is trying to achieve: a synthesis of broadly regional osteological data with an eye toward addressing pertinent biocultural problems by analyzing markers of adaptive success. Stodder describes past bioarchaeological work in the Basin-Range region that encompasses parts of Colorado, New Mexico, and Trans-Pecos Texas, including seminal works by Hrdlika and Hooton. To diagnose subsistence strategy types and adaptive success, Stodder includes some life table information, stature data from several components, and evidence of interpersonal violence and cannibalism. Because of the temporal depth and wide spatial range analyzed, Stodder is careful not to emphasize broad trends but calls for continued subregional investigation of health- and diet-related issues.

Though this volume was published in 1999, all of the chapters were originally published in separate reports between 1988–1990. The chapters were not reedited for this volume and, except for Chapter 4, lack revisions that include new data or fresh reflections on bioarchaeological issues that

are pertinent today. The book would be strengthened by an editorial overview that ties together the underlying theoretical assumptions, defines the cultural-temporal framework of the macroregion, states the basis upon which regions were divided (e.g., geographic, cultural, or ecological), and provides a synthetic statement of work to date (1999). Further, while some tables are immediately amenable to cross-cultural and extraregional comparisons (e.g., the distribution of data by temporal and cultural affiliations), data distributed by "adaptive type" are less informative because the types discussed are inconsistent between chapters. The editor would be well-served to provide definitions as well as tables of the adaptive types and subregional cultural chronologies to help synthesize the data from each chapter and render them comparable.

These problems do not detract from the fact that this volume is loaded with data of significant temporal depth that will be useful for bioarchaeologists who seek comparative samples other than Moundville or Dickson Mounds, the quintessential yet often inappropriate alternatives.

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DIGGING FOR PATHOGENS. ANCIENT EMERGING DISEASES: THEIR EVOLUTIONARY, ANTHROPOLOGICAL AND ARCHAEOLOGICAL CONTEXT. Edited by Charles L. Greenblatt. Rehovot, Israel: Balaban Publishers. 1998. 400 pp. ISBN 0-86689-053-X. \$49.00 (paper).

This book considers infectious diseases and focuses on new techniques to detect bio-

molecular evidence for disease. The emergence of new infectious diseases and the reemergence of old ones raise serious problems for human society. We know very little about evolutionary events that enable pathogens to invade new hosts or to become more successful in their existing hosts. We can sometimes trace these events by molecular phylogenetics, but the results are